UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/768,509	01/30/2004	Mihal Lazaridis	555255012690	6885

33070 7590 05/23/2008

JOSEPH M. SAUER
JONES DAY REAVIS & POGUE
NORTH POINT, 901 LAKESIDE AVENUE
CLEVELAND, OH 44114

EXAMINER	
WOZNIAK, JAMES S	

ART UNIT	PAPER NUMBER
2626	

MAIL DATE	DELIVERY MODE
05/23/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/768,509	LAZARIDIS ET AL.	
	Examiner	Art Unit	
	JAMES S. WOZNIAK	2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *2-13,37-45 and 48-56* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *2-13,37-45 and 48-56* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In response to the office action from 12/21/2007, the applicant has submitted a request for continued examination, filed 2/28/2008, adding claims 51-56, while arguing to traverse the art rejection based on the limitation regarding displaying a list of probable commands while receiving an abbreviated textual command and the limitations of the new claims *(Amendment, Pages 8-9)*. Applicant's arguments have been fully considered, however the previous rejection is maintained due to the reasons listed below in the response to arguments.

Response to Arguments

2. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

With respect to **Claims 2, 37, and 48**, the applicant argues that the prior art of record fails to teach displaying a list of probable commands while receiving an abbreviated textual command or before receiving the entire abbreviated textual commands. In support of such allegations the applicant points to Eide *("Valet: An Intelligent Unix Shell Interface," 1995)* requiring the use of a delimiter indicating an end to text entry.

In response, the examiner notes that the abbreviated natural language text commands are taught by Beauregard *(Col. 7, Line 58- Col. 8, Line 49; Col. 15, Lines 18-58; and Col. 16, Line*

65- Col. 17, Line 31). Eide, on the other hand, provides the teaching of allowing a user to view a list of possible commands for a command that is in the process of being entered *(Pages 37-38).* For example, while *(i.e., during, in the process of, etc)* receiving the command "ls source", which is in the process of being received by the system because it is only partially received *(i.e., "while receiving"- "ls sou")*, Eide teaches that a list of probably commands corresponding to the partially entered command is retrieved and presented to the user *(Page 37).* Thus, since Eide teaches overall retrieving possible commands during the process of receiving a full command *(i.e., "while receiving")* and Beauregard teaches abbreviated natural language text commands, Beauregard in view of Eide teaches the limitations regarding "while receiving the abbreviated textual command". Also, since in Eide the full text command has not been received when alternative choices are presented to the user (Pages 37-38), the prior art combination also teaches the limitations regarding "before receiving the entire abbreviated textual command". Furthermore, the applicant's arguments regarding the lack of a delimiter is not convincing because such a limitation is not recited in the claims. It is worth noting though, that such a limitation would constitute new matter if added to the claim, as per the office action from 7/26/2007. It is also worth pointing out that the process of gradually narrowing down entries in such a manner is identical to the technology commonly used in cell phones which is taught by the prior art cited in the same office action and argued in the office action from 12/21/2007.

For at least the above reasons, the applicant's arguments with respect to claims 2, 37, and 48 have been fully considered, but are not convincing.

The applicant's arguments with respect to new independent claims 51, 54, and 56 *(Amendment, Page 9)* have been fully considered, but are moot with respect to the below new

grounds of rejection. Applicant's arguments also fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out *how* the language of the claims patentably distinguishes them from the references.

Applicant's arguments with respect to claim 52 *(Amendment, Page 9)* fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out *how* the language of the claims patentably distinguishes them from the references. The examiner notes that Beauregard does teach the features of claim 52 and points to the associated below rejection in response.

The rejection of the remaining claims is traversed for reasons similar to the independent claims *(Amendment, Page 10)*. In regards to such arguments, see the above appropriate response.

Claim Objections

3. **Claims 52-53** are objected to because of the following informalities:

In claim 52, line 4, "command text string" should be changed to –command text string corresponding to a second application-- in order to provide proper antecedent basis for this limitation later in the claim.

In claim 53, "a email" should be changed to –an email--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. **Claims 54-55** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 54 recites "executing a particular command....*without determining the probabilities for other commands that might be desired by the user*". This limitation is not supported by the specification. Although the specification notes that a probability threshold is used and a command having a value over this threshold is executed, the specification notes that a *list of results (i.e., a plurality of results having calculated probabilities)* is considered and if any of those results, which already have calculated probabilities, is above 0.5 than a command is executed *(Page 7)*. Thus, the specification indicates that a list of probability results is considered and provides no support for only determining the probability of one particular command without determining the probability for the others. Claim 55 further limits claim 54, which contains new matter, and thus, is also rejected as failing to comply with the written description requirement.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 51-56** are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential elements, such omission amounting to a gap between the elements. See MPEP § 2172.01. The omitted elements (in claims 51-52, 54, and 56) are: structural claim elements for inputting the text string and accessing the database to compare/match the user commands in the database to the input text string. Claim 56 further lacks structural claim elements for displaying frequently used commands.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. **Claims 52-53** are rejected under 35 U.S.C. 102(e) as being anticipated by Beauregard et al *(U.S. Patent: 5,974,413)*.

With respect to **Claim 52**, Beauregard discloses:

A database of user commands for initiating respective software applications *(wordbase database including commands for activating software applications, Col. 8, Lines 50-63; Col. 16, Line 65- Col. 17, Line 31; and Fig. 4, Element 340)*;

A natural language search engine *(Fig. 4, Element 330)* configured to:

Receive a command text string being entered by a user, the text string being entered by a user while the user is in a first application, the text string being in two-part format with one part being an abbreviation for a software application and the other part being an abbreviation for an object of the application *(receiving two text command sections from a user, wherein a first part can comprise a software application and the second part can comprise a program object- multi-word commands, Col. 8, Lines 50-63; user-selected abbreviated natural language commands, Col. 15, Line 59- Col. 16, Line 6; example of activating a software program and performing an operation in the program based on a two part command, Col. 46, Line 55- Col. 47, Line 14; and "wordbase" database containing command code words and associated service scripts, Col. 16, Line 65- Col. 17, Line 31)*;

Compare the text string to the user commands in the database, to determine which of the user commands matches with the text string *(command matching processing, Col. 17, Lines 16-30; and Col. 27, Lines 50-65)*; and

Executing the matching user command by initiating the corresponding second application, whereby the user launches the second application from within the first application by entering the command string within the first application *(user commands that can launch a new software applications from within a running application, Col. 10, Line 33- Col. 11, Line 16; and example of such an instance, Col. 44, Lines 40-67).*

With respect to **Claim 53**, Beauregard further discloses:

The first application is an email composing application and the second application is a calendar application *(ability to launch any application anywhere within a computer application*

environment, Col. 10, Line 33- Col. 11, Line 16; and Col. 44, Lines 40-67; and calendar and email applications, Col. 10, Lines 33-49).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. **Claims 2-5 and 9-13** are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauregard et al *(U.S. Patent: 5,974,413)* in view of Eide *("Valet: An Intelligent Unix Shell Interface," 1995)* and further in view of Laursen et al *(U.S. Patent: 6,288,718)*.

With respect to **Claim 2**, Beauregard discloses:

Receiving an abbreviated textual command in a natural language search engine *(text input, Col. 7, Line 58- Col. 8, Line 49; command code words, Col. 15, Lines 18-58; and wordbase search, Col. 16, Line 65- Col. 17, Line 31)*;

While receiving the abbreviated textual command performing the steps of:

Searching a natural language database that stores a data set of abbreviated textual commands and associated application commands *(searching a "wordbase" database containing command code words and associated service scripts, Col. 16, Line 65- Col. 17, Line 31)*;

Displaying a list of probable complete commands matching the currently received portion of the abbreviated textual command *(displaying multiple commands in a window that may correspond to a entered command word, Col. 42, Lines 27-50)*.

Although Beauregard teaches a means for presenting a list of probable commands to a user and further discloses recording command history information *(Col. 17, Lines 16-31)*, Beauregard does not specifically suggest utilizing the history information in determining the one or more probable commands. Eide, however, recites a means for determining probable input commands that utilizes a command history *(user input history used in determining a text command, Pages 28-31)*. Eide further teaches the ability to perform a command search process similar to that of the claimed invention while receiving a textual input command *(pages 37-38)*.

Beauregard and Eide are analogous art because they are from a similar field of endeavor in text command systems. Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Beauregard with the means for determining probable input commands during text command reception utilizing a command history as taught by Ramaswamy in order to reduce tedium and typing errors in command entry while increasing command match frequency *(Eide, Pages 29 and 37)*.

Beauregard and Eide do not specifically suggest text entry and list narrowing using a portable device, however, Laursen discloses a potable device that progressively reduces a list of potential text entries with each entered character *(Col. 2, Lines 1-24)*.

Beauregard, Eide, and Laursen are analogous art because they are from a similar field of endeavor in user interfaces utilizing text entry. Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Beauregard in view

of Eide with the portable device embodiment taught by Laursen in order to further extend the command entry system to other well-known types of portable computing devices *(text command invention is portable to any type of computer, Beauregard, Col. 43, Lines 23-31)*.

With respect to **Claim 3**, Beauregard further discloses:

If a user selects a complete command from the list, then setting the complete command as the abbreviated textual command, and executing the associated application command *(selection of a displayed script command and script execution, Col. 43, Lines 1-13)*.

With respect to **Claim 4**, Beauregard additionally recites:

If a user does not select a complete command from the list, then receiving an entire abbreviated textual command in the natural language search engine *(no match is found and a next action word is accepted, Col. 18, Lines 1-4)*.

With respect to **Claim 5**, Eide further recites:

If the abbreviated textual command has an exact match in the data set, then setting the exact match as a user command *(Pages 37-38)*;

If the abbreviated textual command does not have an exact match in the data set, then analyzing historical preferences to determine if the abbreviated textual command has a probable match in the data set *(misspelled command corrections, Pages 94-95)*;

If the abbreviated textual command has a probable match in the data set, then setting the probable match as the user command *(Pages 94-95 and returning a single probable command)*;

If the abbreviated textual command does not have a probable match in the data set then presenting a list of possible command, receiving a command choice and setting the command choice as the user command (suggest probable command, Pages 94-95); and

Executing the command *(Pages 37-38)*.

With respect to **Claim 9**, Beauregard further discloses:

The abbreviated textual command has a first component and a second component, wherein the first component represents a desired application command, and the second component represents a desired application tag (text command and application identifying tag, Col. 11, Lines 18-26); and

The natural language database stores a data set of abbreviated textual commands and associated application commands and tags *(database storing command text and application tags, Col. 34, Lines 8-18)*.

With respect to **Claim 10**, Beauregard further discloses:

The abbreviated textual command is entered into a graphical dialog box *(action box, Col. 27, Line 66- Col. 28, Line 9)*.

With respect to **Claim 11**, Beauregard further discloses:

The natural language search engine can receive the abbreviated textual command while any of the software applications are executing *(Col. 10, Lines 3-8)*.

With respect to **Claim 12**, Eide further discloses utilizing history data in misspelling correction (*Pages 94-95)*.

With respect to **Claim 13**, Eide further recites:

The list of possible commands includes a set of generic application commands *(Page 97)*.

12. **Claims 6-8** are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauregard et al *(U.S. Patent: 5,974,413)* in view of Eide *("Valet: An Intelligent Unix Shell Interface," 1995)*

in view of Laursen et al *(U.S. Patent: 6,288,718)* and further in view of Ramaswamy et al *(U.S. Patent: 6,622,119)*.

With respect to **Claim 6**, Beauregard in view of Eide and further in view of Laursen teaches the software application launching method utilizing history information, as applied to Claims 2 and 5. Beauregard in view of Eide and further in view of Laursen does not specifically suggest probability factors associated with historical command preferences nor the determination of a probably command as having greater than a threshold probability value however, Ramaswamy further discloses:

The step of analyzing historical preferences is performed using a set of probability factors that are generated based on historical preferences, where the abbreviated textual command has a probable match in the data set when a probability factor associated with the probable match is greater than a predetermined value *(probabilities based on user history, Col. 5, Lines 19-45; Col. 6, Lines 11-28; and probability threshold, Col. 8, Lines 3-24)*.

Beauregard, Eide, Laursen, and Ramaswamy are analogous art because they are from a similar field of endeavor in language command systems. Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Beauregard with the means for determining probable input commands utilizing a command history as taught by Ramaswamy in order to achieve improved natural language understanding accuracy through the use of user regularity scores *(Ramaswamy, Col. 1, Lines 23-33)*.

With respect to **Claim 7**, Ramaswamy further discloses:

The predetermined value is defined by a user *(predetermined threshold that would inherently be set by some type of user, Col. 8, Lines 3-24)*.

With respect to **Claim 8**, Ramaswamy additionally recites:

Adjusting the set of probability factors each time the abbreviated textual command is entered into the hand-held device *(using input commands to adapt command prediction for a particular user, Col. 3, Lines 14-26; Col. 9, Lines 9-31)*.

13. **Claims 37-45 and 48-50** are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauregard et al *(U.S. Patent: 5,974,413)* in view of Eide *("Valet: An Intelligent Unix Shell Interface," 1995)*.

With respect to **Claim 37**, Beauregard discloses:

Receiving an abbreviated textual command in a natural language search engine *(text input, Col. 7, Line 58- Col. 8, Line 49; command code words, Col. 15, Lines 18-58; and wordbase search, Col. 16, Line 65- Col. 17, Line 31)*;

While receiving the abbreviated textual command performing the steps of:

Searching a natural language database that stores a data set of abbreviated textual commands and associated application commands *(searching a "wordbase" database containing command code words and associated service scripts, Col. 16, Line 65- Col. 17, Line 31)*;

Displaying a list of probable complete commands matching the currently received portion of the abbreviated textual command *(displaying multiple commands in a window that may correspond to a entered command word, Col. 42, Lines 27-50)*.

Although Beauregard teaches a means for presenting a list of probable commands to a user and further discloses recording command history information *(Col. 17, Lines 16-31)*, Beauregard does not specifically suggest utilizing the history information in determining the one

or more probable commands. Eide, however, recites a means for determining probable input commands that utilizes a command history *(user input history used in determining a text command, Pages 28-31)*. Eide further teaches the ability to perform a command search process similar to that of the claimed invention while receiving a textual input command *(pages 37-38)*.

Beauregard and Eide are analogous art because they are from a similar field of endeavor in text command systems. Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Beauregard with the means for determining probable input commands during text command reception utilizing a command history as taught by Ramaswamy in order to reduce tedium and typing errors in command entry while increasing command match frequency *(Eide, Pages 29 and 37)*.

With respect to **Claim 38**, Eide further recites:

Displaying the probable subset of the complete commands to the user (Page 37).

With respect to **Claim 39**, Eide additionally recites:

Receiving an indication of which of the displayed complete commands a user chooses and executing the chosen complete command *(Page 37)*.

With respect to **Claim 40**, Eide further discloses:

Receiving a further portion of the abbreviated textual command and narrowing the probable subset based on the further portion received *(Page 37)*.

With respect to **Claim 41**, Eide recites:

When the probable subset consists of only one complete command, executing that one complete command *(Page 37)*.

With respect to **Claim 42**, Beauregard further discloses uses-defined textual commands *(Col. 9, Lines 19-22)*.

With respect to **Claim 43**, Eide discloses the command history information as applied to Claim 2.

With respect to **Claims 44-45**, Eide recites past commands selected more than half of the time *(Pages 29-30; Pages 37-38; Pages 94-95)*.

Claim 48-49 contains subject matter similar to Claim 37, and thus, is rejected for the same reasons.

With respect to **Claim 50**, Eide discloses the historical preference data used for text entry completion, as applied to Claim 37.

14. **Claim 51** is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauregard et al *(U.S. Patent: 5,974,413)* in view of Vanbuskirk et al *(U.S. Patent: 6,327,566)*.

With respect to **Claim 51**, Beauregard discloses:

A database of user commands for initiating respective software applications *(wordbase database including commands for activating software applications, Col. 8, Lines 50-63; Col. 16, Line 65- Col. 17, Line 31; and Fig. 4, Element 340)*;

A natural language search engine *(Fig. 4, Element 330)* configured to:

Receive a command text string being entered by a user, the text string being entered by a user, the text string being in two-part format with one part being an abbreviation for a software application and the other part being an abbreviation for an object of the application *(receiving two text command sections from a user, wherein a first part can comprise a software application*

and the second part can comprise a program object- multi-word commands, Col. 8, Lines 50-63; user-selected abbreviated natural language commands, Col. 15, Line 59- Col. 16, Line 6; example of activating a software program and performing an operation in the program based on a two part command, Col. 46, Line 55- Col. 47, Line 14; and "wordbase" database containing command code words and associated service scripts, Col. 16, Line 65- Col. 17, Line 31);

Compare the text string to the user commands in the database *(command matching processing, Col. 17, Lines 16-30; and Col. 27, Lines 50-65)*;

Beauregard also teaches an instance wherein no match is found in a wordbase database *(Col. 18, Lines 1-4)*, the ability of a user to choose from a list of commands *(Col. 42, Lines 27-50)*, and command execution *(Col. 8, Lines 28-39)*, however, does not specifically suggest presenting a list of generic commands when no match is found. Vanbuskirk, however, recites the concept of displaying generic available commands when a command understanding fails *(Col. 7, Lines 2-12; 26-46; and Fig. 6)*.

Beauregard and Vanbuskirk are analogous art because they are from a similar field of endeavor in user command interface systems. Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Beauregard with the means for displaying generic available commands as taught by Vanbuskirk in order to allow a novice user to become familiar with commands that can be processed by an interface *(Vanbuskirk, Col. 7, Lines 26-46)*.

15. **Claims 54-55** are rejected under 35 U.S.C. 103(a) as being unpatentable over Beauregard et al *(U.S. Patent: 5,974,413)* in view of Ramaswamy et al *(U.S. Patent: 6,622,119)*.

With respect to **Claim 54**, Beauregard discloses:

A database of user commands for initiating respective software applications *(wordbase database including commands for activating software applications, Col. 8, Lines 50-63; Col. 16, Line 65- Col. 17, Line 31; and Fig. 4, Element 340)*;

A natural language search engine *(Fig. 4, Element 330)* configured to:

Receive a command text string being entered by a user, the text string being entered by a user, the text string being in two-part format with one part being an abbreviation for a software application and the other part being an abbreviation for an object of the application *(receiving two text command sections from a user, wherein a first part can comprise a software application and the second part can comprise a program object- multi-word commands, Col. 8, Lines 50-63; user-selected abbreviated natural language commands, Col. 15, Line 59- Col. 16, Line 6; example of activating a software program and performing an operation in the program based on a two part command, Col. 46, Line 55- Col. 47, Line 14; and "wordbase" database containing command code words and associated service scripts, Col. 16, Line 65- Col. 17, Line 31)*; and

Executing the matching user command *(Col. 10, Line 33- Col. 11, Line 16; and Col. 44, Lines 40-67)*.

Beauregard does not specifically suggest probability factors associated with historical command preferences, a recency factor of command issuance, nor the determination of a probably command as having greater than a threshold probability value however, Ramaswamy further discloses:

The step of analyzing historical preferences is performed using a set of probability factors that are generated based on historical preferences, where the abbreviated textual command has a

probable match in the data set when a probability factor associated with the probable match is greater than a predetermined value *(probabilities based on user history and a specific time interval, Col. 5, Lines 10-45; Col. 6, Lines 11-28; and probability threshold, Col. 8, Lines 3-24).*

Ramaswamy also discloses limiting a search for highest ranking commands to a small subset *(Col. 6, Lines 17-29).* Thus, one of ordinary skill in the art would have recognized that it would be obvious to utilize a subset of one command probability because Ramaswamy makes it known that a furthest limited subset would result in a lowest computational complexity *(Col. 6, Lines 17-29).*

Beauregard and Ramaswamy are analogous art because they are from a similar field of endeavor in language command systems. Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Beauregard with the means for determining probable input commands utilizing a command history as taught by Ramaswamy in order to achieve improved natural language understanding accuracy through the use of user regularity scores *(Ramaswamy, Col. 1, Lines 23-33).*

With respect to **Claim 55**, Ramaswamy discloses a predetermined probability threshold (Col. 8, Lines 3, Lines 3-24). Although Ramaswamy does not explicitly disclose that a level of 0.5 may be used, a person of ordinary skill in the art would have had good reason to pursue all of the known probability thresholds *(i.e., 0-1.0)* based on a result they desire. It would require no more than "ordinary skill and common sense," to allow the user to preset the probability threshold to 0.5 if that is the accuracy that they require for a particular command application.

16. **Claim 56** is rejected under 35 U.S.C. 103(a) as being unpatentable over Beauregard et al *(U.S. Patent: 5,974,413)* in view of Snapper et al *(U.S. Patent: 7,216,292)*.

With respect to **Claim 56**, Beauregard discloses the natural language command system, as applied to claim 52

Although Beauregard teaches a means for presenting a list of probable commands to a user and further discloses recording command history information *(Col. 17, Lines 16-31; and Col. 34, Lines 3-43)*, Beauregard does not specifically suggest utilizing the history information in determining the one or more probable text inputs or continually narrowing down a list of possible texts as text begins to be entered. Snapper, however, recites a means for determining probable text inputs that utilizes a user history *(user input history used in determining a probable complete text entry, Col. 8, Lines 5-12; and Col. 13, Line 59- Col. 14, Line 5)*. Snapper further teaches the ability to perform a text search process similar to that of the claimed invention while receiving a textual input and without the user having to enter a delimiter *(narrowing down of a list of displayed complete text entries with each successive character entry, Col. 10, Lines 45-60)*.

Beauregard and Snapper are analogous art because they are from a similar field of endeavor in user interfaces utilizing text entry. Thus, it would have been obvious to one of ordinary skill in the art, at the time of invention, to modify the teachings of Beauregard with the means for determining probable text entries during text input reception utilizing a user history as taught by Snapper in order to reduce the need for a user to repeatedly enter a complete text entry *(Snapper, Col. 1, Lines 25-34)*, thus enabling more efficient command entry.

Conclusion

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/James S. Wozniak/
James S. Wozniak
Patent Examiner, Art Unit 2626